

REMARKS

Applicant respectfully requests reconsideration and allowance of subject application. Claims 23-28 are pending.

Applicant thanks the Examiner for the detailed analysis presented in the current Office Action.

Claim Rejections Under 35 U.S.C. § 103

Claims 23, 25, 25 and 28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,058,389 issued to Chandra et al. (hereinafter "*Chandra*") in view of U.S. Patent No. 6,094,694 issued to Hickson et al. (hereinafter "*Hickson*"). Claims 24 and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Chandra* and *Hickson* and further in view of U.S. Patent No. 6,282,565 issued to Shaw. Applicant respectfully traverses these rejections.

Portions of Claims 23 and 25 are reproduced below:

23. A method for a sender to guarantee an exactly once delivery of a message to a receiver, the method comprising:

...sending to the receiver the message in association with the expiration time and with the identifier; and

upon reaching the expiration time, if the message has not yet been deleted, then deleting the message along with the identifier and the expiration time associated with the message, the *deleting being performed by a scavenger thread of the sender.*" (Emphasis added.)

1 25. A computer-readable medium having instructions for
2 performing a method for a sender to guarantee an exactly once delivery of
3 a message to a receiver, the method comprising:

4 ...sending to the receiver the message in association with the
5 expiration time and with the identifier; and

6 upon reaching the expiration time, if the message has not yet been
7 deleted, then deleting the message along with the identifier and the
8 expiration time associated with the message, the *deleting being performed*
9 *by a scavenger thread of the sender.*" (Emphasis added.)
10

11 *Chandra* in view of *Hickson* fail to disclose the recited method of claims 23
12 and 25. Namely, *Chandra* in view of *Hickson* fail to disclose "upon reaching the
13 expiration time, if the message has not yet been deleted, then deleting the message
14 along with the identifier and the expiration time associated with the message, the
15 *deleting being performed by a scavenger thread of the sender.*" (Emphasis added.)

16 The Office realizes *Chandra* is deficient in relation to the subject matter of
17 claims 23 and 25. In particular, the Office appreciates *Chandra* fails to teach or
18 suggest at least the subject matter of the claims that is indicated in the preceding
19 paragraph. The Office asserts *Hickson* cures this deficiency of the *Chandra*
20 patent. Applicant disagrees for the following reasons.

21 In one exemplary implementation described in the present Application, a
22 sender sends a message to a receiver, where the message includes an identifier and
23 an expiration time. The sender also saves the message in a local database, to
24 include the message's identifier and expiration time. (Application specification,
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1 page 2, lines 17-20.) The sender also includes a scavenger thread that will delete a
2 message after it expires. (Application specification, page 13, lines 14-15.)

3 *Chandra* teaches an arrangement for queuing messages received from
4 "agents." *Chandra* does not discuss in detail the operation of these agents. In
5 fact, *Chandra* indicates that the agents "are considered outside the structure of the
6 queuing system, and therefore are not described in detail in this document."
7 (*Chandra*; column 9, lines 5-9.) In essence, the *Chandra* arrangement is a receiver
8 of messages and the agents are the senders. Thus, *Chandra* certainly is unable to
9 teach or suggest "deleting being performed by a scavenger thread of the sender"
10 as is set forth in claims 23 and 25, since senders are not addressed in the *Chandra*
11 patent.

12 *Hickson* teaches an arrangement for handling messages at a receiver side.
13 The arrangement comprises a computer system 1c that includes a message queue
14 11 and a processor 13. (*Hickson*; column 4, lines 21-29.) The computer system 1c
15 receives new messages and stores the messages in a queue 11. The messages are
16 sent from other computer systems 1a or 1b. (*Hickson*; column 4, lines 21-29.)

17 The processor 13 handles retrieval of messages from the queue 11; the
18 handling functions related to the messages after they are retrieved. According to
19 *Hickson*, the processor 13 will delete retrieved messages based on various
20 expiration criteria. (*Hickson*; column 5, lines 6-18.)

21 Both *Chandra* and *Hickson* do not discuss the particulars related to how a
22 sender handles messages sent to a receiver. In fact, *Chandra* and *Hickson* only
23 address the sender side of messages for the sole purpose of explaining that
24 messages are sent from some entity or location. Additional discussion of a sender
25

1 is simply not provided, nor is it necessary based on the inventions described by the
2 two patents relied upon the Office.

3 Because *Chandra* and *Hickson* do not discuss the details of how a sender
4 handles messages, the Office cannot fairly assert that the combination of *Chandra*
5 and *Hickson* teaches or suggests "upon reaching the expiration time, if the
6 message has not yet been deleted, then deleting the message along with the
7 identifier and the expiration time associated with the message, the *deleting being*
8 *performed by a scavenger thread of the sender.*" (Emphasis added; claims 23 and
9 25.) Therefore, Applicant respectfully submits that the rejection of claims 23 and
10 25 in view of *Chandra* and *Hickson* is improper.

11 Portions of Claims 26 and 28 are reproduced below:

12
13 26. A method for a receiver to guarantee an exactly once delivery
14 of a message from a sender, the method comprising:

15 receiving the message in association with an expiration time and
16 with an identifier; and

17 if the expiration time has passed, then discarding the message and
18 the associated expiration time and identifier;

19 *else if the identifier is associated with another message already*
20 *received by the receiver, then discarding the message and the associated*
21 *expiration time and identifier...* (Emphasis added.)

22
23 28. A computer-readable medium having instructions for
24 performing a method for a receiver to guarantee an exactly once delivery of
25 a message from a sender, the method comprising:

1 receiving the message in association with an expiration time and
2 with an identifier; and

3 if the expiration time has passed, then discarding the message and
4 the associated expiration time and identifier;

5 *else if the identifier is associated with another message already*
6 *received by the receiver, then discarding the message and the associated*
7 *expiration time and identifier...* (Emphasis added.)

8
9 The combination of *Chandra* and *Hickson* fail to teach or suggest at least
10 the indicated limitations of claims 26 and 28 for at least the following reasons.

11 As discussed earlier in this Response, *Chandra* and *Hickson* teach receiver
12 side arrangements that are capable of handling messages. The Office realizes
13 *Chandra* is deficient in relation to the subject matter of claims 26 and 28. In
14 particular, the Office appreciates *Chandra* fails to teach or suggest at least the
15 subject matter of the claims that is indicated in the preceding text. The Office
16 asserts *Hickson* cures this deficiency of the *Chandra* patent. Applicant disagrees
17 for the following reasons.

18 In one exemplary implementation described in the present Application, a
19 receiver determines whether a received message is already present in a receiver
20 database, using a unique identifier of the received message. (Application
21 specification, page 12, lines 14-16.) If the identifier is already in the database, the
22 receiver discards the received message. (Application specification, page 12, lines
23 19-20.)

24 Messages queued by the arrangement according to *Chandra* include a
25 MSG_ID and a CORR_ID. (*Chandra*, column 7, lines 19 and 20.) According to

1 *Chandra*, these IDs are used during a DEQUEUE operation. (*Chandra*, column
2 18, lines 26-36.) That is, the IDs are used after the messages are placed in a
3 queue. Therefore, indeed, *Chandra* does not teach or suggest "if the identifier is
4 associated with another message already received by the receiver, then discarding
5 the message and the associated expiration time and identifier." (See claims 26 and
6 28.)

7 The Office maintains that the deficiency of *Chandra* is cured by *Hickson*.
8 Specifically, the Office points to disclosure in column 2, lines 31-39 and the lines
9 58-9 linking to column 3. The Applicant has carefully considered the relied upon
10 portions of *Hickson* and nothing in those portions teaches or suggests the subject
11 matter of claims 26 and 28.

12 Column 2, lines 31-39, of *Hickson* discloses the process of deleting a
13 message from a queue if the message's expiration data denotes that the message
14 has expired. This occurs when a processor requests the message from the queue.
15 There is nothing in the passage that indicates or suggests that the processor checks
16 an identifier of a received message, and "if the identifier is associated with another
17 message already received by the receiver, then discarding the message and the
18 associated expiration time and identifier," as is set forth in claims 26 and 28 of the
19 present Application. The disclosure of lines 58-9, linking to column 9, also does
20 not teach or suggest the indicated subject matter of claims 26 and 28. That
21 *Hickson* disclosure merely relates to eliminating time-expired messages from a
22 message queue based on expiration data. Nothing in the disclosure suggests or
23 even hints that an identifier is checked and "if the identifier is associated with
24 another message already received by the receiver, then discarding the message and
25 the associated expiration time and identifier," as is set forth in claims 26 and 28 of

1 the present Application. Therefore, Applicant respectfully submits that the
2 rejection of claims 26 and 28 in view of *Chandra* and *Hickson* is improper.

3 Claims 24 and 27 are allowable by virtue of their dependency on an
4 allowable independent claim. Moreover, Applicant has carefully considered the
5 disclosure of *Shaw* and respectfully submits that it fails to cure the deficiencies
6 discussed in relation to the *Chandra* and *Hickson* and patents.

7 In accordance with the above, Applicant respectfully requests that the § 103
8 rejections of claims 23-28 be withdrawn.

Conclusion

Claims 1-4 and 9-18 are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of the subject application. If any issue remains unresolved that would prevent allowance of this case, the Examiner is requested to urgently contact the undersigned attorney to resolve the issue.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 12-0769 for any additional fees required under 37 CFR §1.16 or under §1.17; particularly, extension of time fees.

Respectfully Submitted,

Date: 9-29-2005

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